



# TD-K Twist & Dry™ High Pressure Nozzle

BETE has developed an innovative solution to expand spray dryer capacity up to 10,000 psi with our new high pressure Twist & Dry (TD-K) nozzle equipped with a PEEK (polyetheretherketone) backup ring.

### Product Name:

TD-K for high pressure applications.  
Includes models TD-7K (up to 7,000 psi) and TD-10K (up to 10,000 psi)

### Advancements from Current Line:

New high pressure capacity; increased from 3,500 psi to 10,000 psi

### Operating Conditions:

- TD-10K: up to 10,000 psi at temperatures up to 450°F; achieved with a PEEK backup ring and Duplex 2205 carrier
- TD-7K: up to 7,000 psi at temperatures up to 450°F; achieved with a PEEK backup ring

### Customer Requirements:

Spray dryer operators have reported that they can increase yield by operating at higher pressures.

### BETE's Solution:

By modifying the TD body to take a backup ring, BETE developed the TD-K configuration which allows leak-proof operation up to 10,000 psi.

### Benefits:

- Operate at high pressures and temperatures
- Greater yield capacity
- Safe, leak-proof operation
- Minimal additional cost

### Technical Questions?

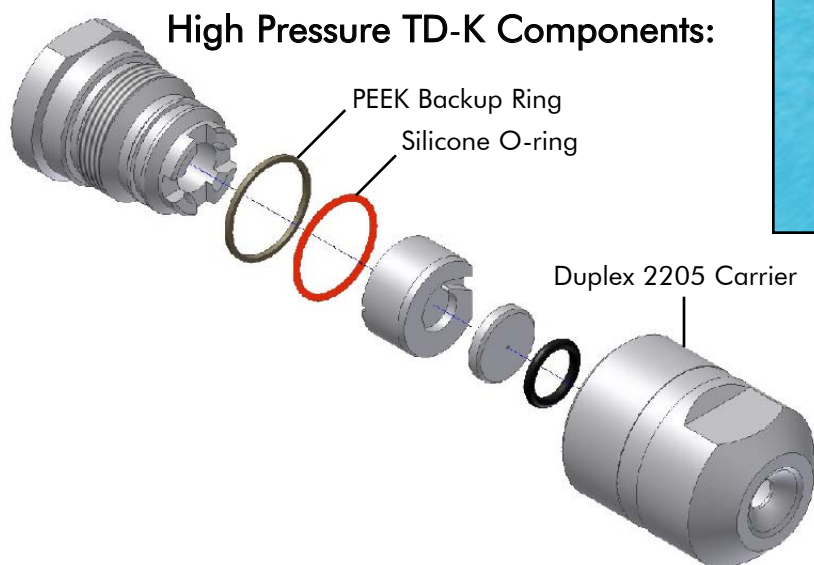
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413-772-2166 x 113

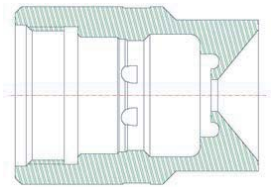


# Twist & Dry™ Components & Options

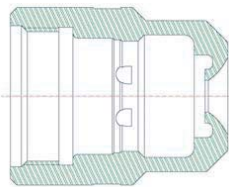


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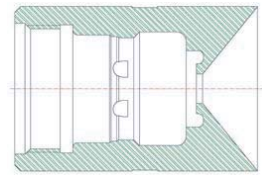
Pressure		Temperature		
bar	psi	up to 302°F (150°C)	up to 400°F (204°C)	up to 450°F (232°C)
689	10,000	TD 10K Viton 90 O-ring w/ PEEK Backup Ring Carrier in Duplex 2205 TD 10K only available in Carriers 5 and 11	TD 10K Viton 90 O-ring w/ PEEK Backup Ring Carrier in Duplex 2205 TD 10K only available in Carriers 5 and 11	TD 10K Silicone O-ring w/ PEEK Backup Ring Carrier in Duplex 2205 TD 10K only available in Carriers 5 and 11
483	7,000	TD 7K Viton 90 O-ring w/ PEEK Backup Ring	TD 7K Viton 90 O-ring w/ PEEK Backup Ring	TD 7K Silicone O-ring w/ PEEK Backup Ring
350	5,076	TD Viton 90 O-ring		
241	3,500		TD Viton 90 O-ring	
55	800			TD Silicone O-ring



Carrier 1 (C11) (shown)  
Carrier 11 (C111) - without lugs



Standard TD Carrier  
Carrier 2 (C12) (shown)  
Carrier 5 (C15) - without lugs



Carrier 10 (C110) (shown)  
Carrier 12 (C112) - without lugs

## To Order: Spray Set-up Number

1/4 TD 2 - 025 - CI1 - 7K - 45 - B @ 7H

pipe size

series

swirl number

orifice

carrier style  
omit for TDL, or standard carrier, model #2

pressure  
omit for TDL or if pressure is less than or equal to 3,500 psi (241 bar)

**7K** if pressure is greater than 3,500 psi and less than or equal to 7,000 psi; needs PEEK backup ring

**10K** if pressure is greater than 7,000 psi and less than or equal to 10,000 psi; needs PEEK backup ring + Duplex 2205 carrier material

material

thread  
omit if NPT

temperature  
omit if temperature is less than or equal to 400°F (204°C)

**45** if temperature is greater than 400°F and less than or equal to 450°F (232°C); needs Silicone O-ring

PEEK™ is a registered trademark of Victrex.